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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,925	06/28/2007	Gilles Durand	IPG-PT004	1829
3624 7590 01/05/2010 VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			EXAMINER KELLEY, STEVEN SHAUN	
			ART UNIT 2617	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/581,925

Applicant(s)

DURAND ET AL.

Examiner

STEVEN KELLEY

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 02/101875 to Ostervall (hereinafter "Ostervall").

Regarding claim 1, which recites "a radio communications terminal comprising: a housing formed of a rear shell and a front shell, a printed circuit card disposed between the rear shell and the front shell and an energy storing device, the energy storing device, the rear shell and the printed circuit card forming an enclosed space containing a patch antenna", Ostervall shows (in Figs. 1, 4 and 5) a mobile phone which includes a printed circuit card (1), a battery (4) (or "energy storing device" as recited) and an antenna arrangement (2). The position of these elements (in all of Figs. 1, 4 and 5) is as recited in claim 1, as in all of these Figs. the antenna arrangement (2) is located above battery (4) and between printed circuit card (1) and a rear housing (which is not shown in order to show placement of the internal components within the mobile phone). Therefore, in all of Figs. 1 4 and 5, the antenna (2) of Ostervall is located in the "enclosed space" formed by the battery, printed circuit card and rear housing, as

recited. Regarding the word “enclosed”, as the extent of “enclosure” is not defined (and this term is not used in the written specification), any space may be interpreted to be an “enclosed space.” Additionally, as the space is located within the housing (front and rear shells), it is “enclosed” by the housing, as recited. Ostervall however, does not show the housing (such as the recited front and rear shell) in the arrangements shown in Figs. 1, 4 and 5. As Ostervall refers to Figs. 1, 4 and 5 as “stripped-down” views and does teach (see for example page 1) that the “mounting of an antenna arrangement inside the housing of a mobile phone” is to “avoid protruding antenna parts”, it is inherent that the antenna arrangement (along with the battery and PCB) shown in Figs. 1, 4 and 5 would be enclosed by a front and rear shell, positioned as recited. Additionally, Ostervall teaches that the antenna assembly “may comprise any type of radiating element”, such as the recited “patch antenna”.

Regarding claim 2, antenna 2, “fills the enclosed space”, as recited.

Regarding claim 3, the antenna (2 and 2' as shown in Fig. 4) are located in the plane (above the battery and beneath the rear housing), as recited.

Regarding claim 4, the antenna (2 and 2') is located in the plane (which is interpreted to be the same plane as claim 3, which uses different words to describe the plane above the battery and beneath the rear housing (plane of 2 and 2')), as recited.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostervall in view of the Prior Art described (and shown in Figs. 1A and 1B) in the instant application (hereinafter "admitted Prior Art").

Regarding claim 1, as described above, Ostervall teaches (shows in Figs. 1, 4 and 5) a radio communications terminal comprising: a housing formed of a rear shell and a front shell (not shown), a printed circuit card disposed between the rear shell and the front shell (printed circuit board (PCB) 1); an energy-storing device (battery 4), the energy storing device, the rear shell and the printed circuit card forming an enclosed space containing a patch antenna (see Figs. 1, 4 and 5, where the antenna (2) of Ostervall is located in the "enclosed space" formed by the battery, printed circuit card and rear housing, as recited).

As Ostervall does not explicitly show a housing formed with a front and rear shell, as recited, the admitted Prior Art is added for completeness to show a housing.

As shown in Fig. 1B in the instant application, a housing (2) of a mobile phone includes a rear shell 20 and a front shell 30. The front 20 and rear 30 shells are also physically located with respect to a printed circuit card (70) as recited. Pages 3 and 6 of

the instant specification teach motivations for using the vacant spaces in the admitted Prior Art antenna structure shown in Figs. 1A and 1B.

Therefore, in order to protect and shield the antenna structure of Ostervall (as described on page 1 of Ostervall) it would have been obvious to cover the antenna structure (including battery and printed circuit card) of Ostervall with a front and rear shell as described in the admitted Prior Art. Additionally, as Ostervall teaches that the antenna assembly "may comprise any type of radiating element", and the admitted Prior Art teaches the use of patch antennas, it would have been obvious to use patch antennas in Ostervall, as is conventional.

Regarding claim 2, which recites "wherein the patch antenna fills the enclosed space", as the "extent of filling" is not clearly defined and as the antenna 2' of Ostervall is in the enclosed space, it may be interpreted to "fill the enclosed space" as recited.

Regarding claim 3, which recites "wherein the patch antenna includes microstrips formed in a first plane extending between an upper surface of the energy-storing device and the rear shell", Ostervall shows the antenna structure 2 and 2' being located "in a plane above the upper surface of the energy-storing device", and would be located "between the upper surface of the energy-storing device and the rear shell", when covered by the rear shell (as modified by the admitted Prior Art).

Regarding claim 4, which recites "wherein the patch antenna includes microstrips formed in a second plane that shares a surface with an inner surface of the rear shell of the housing", Ostervall shows the antenna structure 2 and 2' being located "in a plane

above the upper surface of the energy-storing device", which when modified (covered) by the housing of the admitted Prior Art, would be "be in a plane (and share a surface) with an inner surface of the rear shell of the housing", as recited.

5. Applicant's arguments filed October 2, 2009 have been fully considered but they are not persuasive. Regarding the section 102 rejection, Applicants reproduce Fig. 4 of Ostervall and provide only one sentence of arguments regarding claim 1 and the Ostervall reference. Applicants one (sentence) argument is "Ostervall does not, however, disclose or suggest that a battery, a rear shell and a printed circuit card form an enclosed space containing a patch antenna, as recited in claim 1". Applicants however, provide no explanation as to why or how the arrangements shown in Ostervall do not show the claimed subject matter. As described above, all of Figs. 1, 4 and 5 of Ostervall show an antenna 2, which is located between a printed circuit card 1, a battery 4, and a rear housing (inherent in Ostervall). Regarding the section 103 rejection, Applicants argue that the Prior Art does not cure the deficiencies of Ostervall. As described above, the Prior Art shown and discussed in the instant application is added to explicitly teach and show the conventionality of a housing (front and rear shells) and patch antennas. While there may be some structural differences between Ostervall and the instant invention (in embodiments not yet claimed), the broad recitation of features in claim 1 is still anticipated and/or obvious (in view of Ostervall), as set forth above.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **STEVEN KELLEY** whose telephone number is (571) 272-5652. The examiner can normally be reached on Monday-Friday, 9AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SSK/

/LESTER KINCAID/

Supervisory Patent Examiner, Art Unit 2617